

Sugarcane Bagasse

REFERENCE MATERIAL

Pedigree

Institution: Alama Sugar Plantation
Location: Pointe Coupee County, LA
Crop Year: 2014

Sample Preparation: Processed Bagasse
Received at INL: 2015

Proximate, Ultimate & Calorimetry

Table 2. Proximate, ultimate, and calorific values for Reference Sugarcane Bagasse (reported on a dry basis)

Proximate ^a			Ultimate ^b					Calorimetry ^c	
%Volatile	%Ash	%Fixed Carbon	%Hydrogen	%Carbon	%Nitrogen	%Oxygen	%Sulfur	HHV	LHV
76.02	10.56	13.41	5.38	45.24	0.36	38.41	0.05	7828.73	6498.83

^aProximate analysis was done according to ASTM D 5142-09

^bUltimate analysis was conducted using a modified ASTM D5373-10 method (Flour and Plant Tissue Method) that uses a slightly different burn profile. Elemental sulfur content was determined using ASTM D4239-10, and oxygen content was determined by difference

^cHeating values (HHV, LHV) were determined with a calorimeter using ASTM D5865-10

Elemental Ash

Table 3. Elemental ash composition^a of Reference Sugarcane Bagasse

%Al as Al ₂ O ₃	%Ca as CaO	%Fe as Fe ₂ O ₃	%K as K ₂ O	%Mg as MgO	%Mn as MnO	%Na as Na ₂ O	%P as P ₂ O ₅	%Si as SiO ₂	%Ti as TiO ₂	%S as SO ₃
7.20	2.74	2.40	4.46	1.30	0.06	1.30	0.95	79.19	0.40	0.57

^aDetermined as described in ASTM standards D3174, D3682 and D6349

Contact

For questions regarding biomass material or analytical data please contact Amber Hoover at amber.hoover@inl.gov or 208-526-5992.

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